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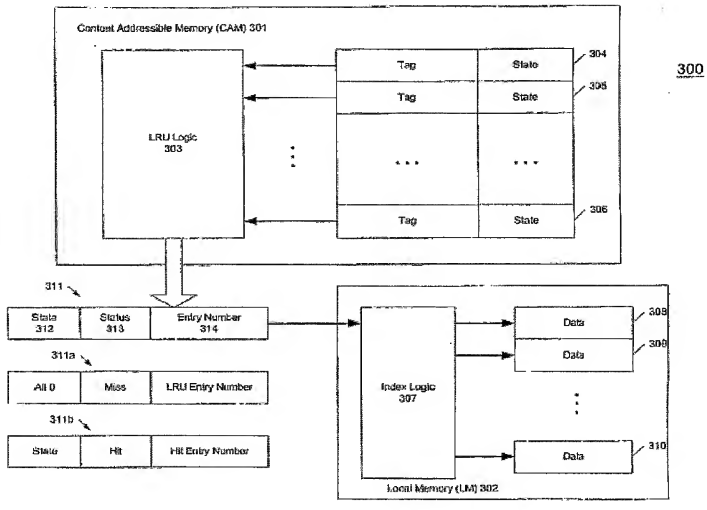
(54) Title: AUTOMATIC CACHING GENERATION IN NETWORK APPLICATIONS



(57) Abstract: Automatic software controlled caching generations in network applications are described herein. In one embodiment, a candidate representing a plurality of instructions of a plurality of threads that perform one or more external memory accesses is identified, where the external memory accesses have a substantially identical base address. One or more directives and/or instructions are inserted into an instruction stream corresponding to the identified candidate to maintain contents of at least one of a content addressable memory (CAM) and local memory (LM) of a processor, and to modify at least one of the external memory access to access at least one of the CAM and LM of the processor without having to perform the respective external memory access. Other methods and apparatuses are also described.

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